

CLAIMS

1. A hermetic compressor storing oil in a hermetic container and accommodating a compression mechanism for compressing refrigerant gas,

wherein the compression mechanism comprises:

5 a crank shaft disposed in vertical direction, and having a main shaft and an eccentric shaft,

a block forming a cylinder,

a piston making a reciprocating motion in the cylinder, and having a top surface and a skirt surface, both vertical to a direction of the reciprocating motion,

10 a connecting rod for coupling the eccentric shaft and the piston, and .

an oil supply system for supplying the oil to an outer circumference of the piston,

grooves are provided at an upper side and a lower side of the outer circumference of the piston, and

15 of an outer shape of the grooves, the outer shape of the grooves communicating with a space in the hermetic container at least when the piston is in a bottom dead center is a shape not forming a parallel line to an axial center of the piston when the grooves are developed in a plane.

2. The hermetic compressor of claim 1,

20 wherein all of the outer shape of the grooves are shapes not forming the parallel line to the axial center of the piston when the grooves are developed in a plane.

3. The hermetic compressor of claim 1,

25 wherein a depth of the grooves from the outer circumference of the piston is not smaller than 50 µm but not greater than 400 µm.

4. The hermetic compressor of claim 1,

wherein the outer shape of the grooves is a semicircular shape extending toward a skirt side of the piston, and the semicircular shape includes a first outer shape extending toward the skirt side of the piston, a second outer shape parallel to the top surface of the piston, and a third outer shape linking the first outer shape and the second outer shape, and a curvature of the first outer shape is smaller than that of the third outer shape.

5. The hermetic compressor of claim 1,

wherein the refrigerant gas is gas of hydrocarbon refrigerant.

10 6. A hermetic compressor storing oil in a hermetic container and accommodating a compression mechanism for compressing refrigerant gas,

wherein the compression mechanism comprises:

a crank shaft disposed in vertical direction, and having a main shaft and a eccentric shaft,

15 a block forming a cylinder,

a piston making a reciprocating motion in the cylinder, and having a top surface and a skirt surface, both vertical to a direction of the reciprocating motion,

a connecting rod for coupling the eccentric shaft and the piston, and

an oil supply system for supplying the oil to an outer circumference of the
20 piston,

grooves are provided at an upper side and a lower side of the outer circumference of the piston,

the grooves include a first groove portion extending toward a skirt side of the piston, and a second groove portion extending toward a top side of the piston, and

25 the outer shape of the first groove portion is curved, and the first groove

portion communicates with a space in the hermetic container at least when the piston is in a bottom dead center.

5

10

15

20

25